

*Agave Virginica*, L. False aloe. This plant I have only obtained from the top of a sandstone hill near Mine La Motte, Madison county.

*Yucca angustifolia*. Common only on bare "Bluff" hills of Atchison and Holt. Have found it no where else in Missouri. About 3 feet high and quite handsome. Is common further west.

*Phragmites communis* Trin. A reed 5 to 12 feet high, not common but where growing we find dense thickets. Found in marshy ground in Nodaway, Macon, Lafayette, Saline and Bates. The musk rats use it in the construction of their huts.

*Pontederia cordata*, L. This I have only found on ponds in Jasper county.

The chief timbered region of Missouri lies east of a line drawn from the northeast to the southwest corner of the State, although there are some large prairies east of this and some extensive tracts of woodland on the west.

[In determining genera and species I am under many obligations for assistance to Dr. Geo. Engelmann of St. Louis.]

HONORARY NAMES IN SCIENTIFIC NOMENCLATURE.—EDITORS GAZETTE.—A few weeks ago an article appeared in a widely circulated California Journal criticising my action in naming a new flower—*Gilia Parrya*—"to honor a noble lady, who has done eminent service for botany," Mrs. Dr. C. C. Parry, late of California, now returned to Davenport, Iowa

As the criticism was couched in respectful language, and, moreover, as it contains a protest quite often heard, to the use of honorary names in science, I propose to discuss the subject a little and explain the propriety of admitting a few such names to the records of science in accordance with the practice of the masters in each, to the annoyance, it appears, of a few persons, who have evidently not given the subject much thought.

The plea for descriptive names is an old one, and many a scientist has kept strictly to the practice of giving them only, and by this very method has introduced confusion of the very character into our nomenclature.

Let us look first to the origin of science and of scientific names. "Science is knowledge systematically arranged, so as to be conveniently taught, easily learned and readily applied." Art is this knowledge applied to use. Coming down the steps of time, a master-mind arises one after another, seizes the materials at hand, arranges, names, publishes his book and departs, leaving his impress upon the science more or less indelible, according to the strength of his mind or the admiration of his followers. When all the known objects of a particular science or branch of a science are thus collected and compared, no difficulty is found in distinguishing each from each, and very appropriate names are generally given them. As research continues, however, and more genera and species are added, many of the established names are found no longer distinctive, others are vastly more applicable to the new forms, etc.

Again, descriptive names sometimes prove indefinite afterward, because of the accumulation of material, showing that the first name was given to an aberrant form or variety, totally different from the typical plant or animal.

Still again, the early scientists, working with inferior or no instruments, made continual errors, both of observation and interpretation, hence their names are now mainly inappropriate or misleading. With every re-organization of a science, there comes an attempt to correct these manifold errors, followed in turn by confusion and contest, measured by the amount of re-naming done and the weight of the new authority. We can never hope to have our scientific names crystallized into a nomenclature as permanent as the conglomerate rock until research has revealed every form of plant that grows, and every kind of animal that lives on the earth.

One of the first things we teach our pupils in science is the appropriateness and beauty of scientific names. We expatiate upon them with great pleasure and generally make the theme attractive, but no sooner does our tyro get well into the meshes of a science, than he finds one after another of its nice distinctions falling utterly, and that to follow the literal meanings would often totally mislead. Thus we learn to regard technical names, especially those coming down from the old masters, as distinctive only, not necessarily descriptive. Names denoting locality are often quite as unfortunate as descriptive ones. I could fill the GAZETTE with proofs that descriptive names as often fail in time to distinguish objects, as they continue to distinguish them. The name becomes merely a meaningless term, retained out of reverence for the author or to show the early conception of the object.

Linnaeus and Cuvier—worthies held in reverence by every true lover of nature—were the pioneers of modern research, and no better proof of their ability is needed than the statement that they studied and gave scientific names to every plant and animal known at their day, many of which names are retained to the present and, no doubt, a few will be until the end of time; but, as a matter of history, nine-tenths of their names have been quietly dropped or boldly overruled by subsequent scientists.

The thing aimed at in nomenclature is *distinctiveness*; the giving of such a name as will forever distinguish the object from every other in creation. In the naming of large families the distinctions become less prominent and certain, while upon the accession of a large number of species, the whole family has again and again to be revised. Each scientist aims as far as possible to give descriptive names, but each learns from his predecessors how meaningless most of them become; so he casts about him for other names that will *stick* he hopes, through time.

And right here comes in one of the most beautiful and touching characteristics of the true scientist—the recognition of the labors and merits of others. Full well he knows the toil and exposure of the explorer, the study and pains-taking of the discoverer; and also how illy both are requited with this world's goods; so he is ever ready to give the poor meed of honor to whom honor is due. With an object before him, the result of severe exploration or research, how naturally that the discoverer's name should be indelibly associated with the new object; and with what love and loyalty he coins it into a technical distinction for the object given by unmeasured toil to science and the world.

Generic names are Latin nouns arbitrarily formed often from some medicinal or other virtue, real or supposed, or some resemblance to other objects, or they are derived from a country, or they are old classic words of no meaning whatever; and lastly they are sometimes coined from the name of a distinguished scientist or patron of science. Specific names are Latin adjectives, singular in number and agreeing in gender with the name of their genus. They are mostly founded upon distinctive characters, resemblances, uses, etc., and quite often are commemorative names. Specific honorary names are of two kinds: possessive and dedicative. If the person honored is the discoverer, his or her name is used in the form of the Latin genitive (or possessive case), as, *Viola Nuttallii*, *Cheilanthes Cooperæ*. If the name is conferred as a recognition of merit, it is used as an adjective ending in *nus*, *na* or *num*; as *Ceanothus Veitchianus*, *Oniscus Mariana*, and *Lilium Bloomerianum*, when the object is said to be *dedicated*.

The number of commemorative names of necessity will always be few compared with descriptive ones, but as every science has a small number it is quite certain that each will always retain a few in accordance with the law of human kindness, which, it is hoped, will always meet return.

What warm heart does not cheerfully acquiesce in the grateful affection of eminent scientists who have dedicated certain small genera of plants or animals to Linnaeus, Cuvier, Jussieu, DeCandolle, Levoisier, Maximowicz, Agassiz, Adanson, Audu-

bon, Berlandier, Bentham, Brown, Bigelow, Baykin, Brewer, Canby, Cary, Chapman, Clayton, Chamisso, Clinton, Dahl, Davy, Dana, Descarte, Engelmann, Eaton, Eschscholtz, Douglas, Faraday, Franklin, Fuller, Gay-Lussac Gray, Hooker, Hudson, James, Jefferson, Kuhn, Lamarck, Lavater, Le Conte, Lindley, Ludwig, Marsh, Marshall, Menzies, Michaux, Mitchell, Nuttall, Olney, Packard, Pursh, Richardson, Riley, Sprengel, Sullivant, Silliman, Thurber, Torrey, Tournefort, Tyndall, Wood, Watson, Wilson, Willdenow, Whitney, Wright, Parry, Palmer; and our Californians, Bolander, Kellogg, Bloomer, Davidson, Harford, Harkness, and Edwards.

Please permit a few words in regard to my practice of suggesting names and how I commenced it. In September, of 1873, I was informed that a plant had been named for me by Dr. Asa Gray, of Harvard University, at the instance of Prof. Bolander, who had recently been botanizing in Sierra valley with me. I was thus ushered into the large and interesting family of *Astragalus*. I found myself in good company. There was Pursh, Gray, Hooker, Geyer, Coulter, Menzies, Douglas, Horn, Anderson, Morton, Parry, Whitney and Bolander.

But other good people to my knowledge were outside; I at once determined to try to get them within. I traveled extensively, collected largely and noted carefully. With every package of plants sent to Dr. Gray went up petitions of this import: "Should such and such a plant prove new, and it does not name itself by obvious characters (which is always best), please dedicate it to so and so, for the following reasons," etc.

My petitions have often been granted, and with great joy I have celebrated the admission one after another into the family of *Astragalus* alone, Mrs. Pulsifer-Ames, Dr. D. G. Webber, Prof. E. L. Case and Mrs. R. M. Austin; and, did your readers know these parties, I don't think one would protest.

Now, Dr. Gray, the generous soul, who confers all these honors, has been a writer of books for 20 years. He is the leading botanist of America, and stands even with Dr. Hooker, of England, as authority in Europe. He is not only the best authority in botany, but in zoology as well. Almost every page of "Webster's Unabridged" bears his name as authority for scientific terms. In view of these facts, I submit that the deliberate acts of one so eminent and of such universal capacity, are far above criticism, in any particular, by common minds; and I rejoice that his greatness is so admirably illustrated by his goodness. With what charming beauty stands out his generous character portrayed against the dark background of selfish money-getters, city plunderers and corporation despots, so amply filling the picture of every-day life in this naughty world.

I am astonished and almost overwhelmed by the latest kindness of Dr. Gray in conferring upon me the crowning honor of a new genus.

I beg the readers pardon for the personal mention in what follows, but the sentences so finely illustrate the animus of good Dr. Gray and his enthusiastic manner of conferring honors, that I cannot forbear offering them for record in your columns.

During the past winter, while studying natural history at Webber lake (where also I celebrated, with bon-fires for three months, the victory of *Gilia Parryæ*), a certain little plant found the May before, on the Mohave river, along with *Gilia Parryæ* and other new things, attracted frequent examination, and every time left me more and more puzzled to determine where it belonged in our new botany of California. At last I took courage to describe it briefly and send my only remaining specimen to Dr. Gray, to whom I had sent a plant at the time of collecting, but who, for some reason, had omitted to report

As afterward appeared, at the same time my letter was on its way to Dr. G. asking for a name, a letter from him was on its way to Dr. Parry, at Davenport, Iowa, stating that he had just come upon a misaid plant "that was received May 16th, 1866, from our

worthy Lemmon," and which "proves to be not a *Coldenia*, as at first supposed, but a neat, new genus," etc. "And now Lemmon's devotion to Mrs. Parry," (alluding to *Gilia Parryæ*), "is rewarded. I mean to rejoice the eccles of his sensitive heart, and do a just deed by naming this humble but interesting plant, *Lemmonia Californica*! I take the specific name," (*Californica*), he adds, "in order to send Lemmon's name down to posterity along with that of his adopted State, in which the most of his arduous labor for botany has been performed. Please forward this letter to him," he concludes, "with my continued regards and a rousing cheer for *Lemmonia Californica*! Hurrah! Yours, ever, A. GRAY."—J. G. LEMMON, *Sierra Valley, Cal.*

FLORA OF NORTH AMERICA, BY ASA GRAY.—This is part of a work that we have all been waiting for and is one that must be in the library of every working botanist. The Flora of North America by Torrey and Gray stopped, thirty-five years ago, at the end of the order *Compositæ*. This part is the first of Volume second, containing *Gnomo-petalæ* after *Compositæ*. The intention is to conclude the second volume with two more parts, Part II containing *Apctalæ* and *Gymnospermæ*, and Part III, *Monocotyledones* and Vascular Cryptogamia. Then the first volume will be worked over and brought to date. Thus the whole work will consist of two volumes, imperial octavo, of about 1,200 pages each. It is hardly necessary to refer to the style and general arrangement of the volume. The name of its author guarantees to us the most philosophical arrangement along with terse and lucid descriptions. It is a fit crowning work for a long life devoted to the earnest study of North American botany. We hope that the demands for this volume will encourage Dr. Gray to prepare for an early publication of the remaining parts. The price is fixed at the very low sum of five dollars. For this sum, the Curator of Harvard University Herbarium, Cambridge, Mass., will send a copy by mail, paying the postage, to any post office address within the United States. The retail price at the publishers is six dollars. Let me urge upon all the readers of the GAZETTE who have not already provided themselves with copies, to send at once for this volume, for it marks an era in the history of North American botany and does away with the necessity of a whole library of government reports, special contributions, proceedings of societies, etc., etc.

RECENT PUBLICATIONS.—We have space merely to acknowledge the receipt of a few of the journals and special publications sent to this office since the last issue.

*American Journal of Science and Arts*, May and June.

*American Naturalist*, June.

*Bulletin of the Torrey Botanical Club*, April and May.

*The Valley Naturalist*, May and June.

*Proceedings of the Davenport Academy of Natural Sciences*, Vol. II, Part I.

*Catalogue of the Phanogamous and Cryptogamous Plants* (including Lichens) of the Dominion of Canada, John Macoun, Belleville, Ont. Price 35 cents; four for one dollar.

*La Belgique Horticole*, January, February and March, 1878.

*Actes du Congrès de Botanique Horticole tenu à Bruxelles*, May, 1876. M. Edouard Morren, Secretary.

*Field and Forest*, March.

*Tsuda's Agricultural Monthly*, Tokio, Japan, 4 Nos.